

REMARKS

This application pertains to repulpable pressure-sensitive adhesives.

Claims 1 and 3-16 are pending; claim 2 being cancelled by this amendment. The limitations of claim 2 have been added to claim 1.

The invention herein relates to block copolymers of at least two different blocks; one being "hard" (high glass transition temperatures) and one being soft (low transition temperatures). To provide these polymers with repulpable properties, one of the blocks is designed to be water soluble. According to the invention, the hard block is provided with polar units that increase the water solubility of this block. This is accomplished by using special monomers to create this block (see page 10, paragraph "Monomers").

Compared with "normal" (= statistically polymerized) copolymers, the number of polar units can be reduced to achieve a water solubility of the whole polymer by introducing the blocks. This is due to the polar units being concentrated in the hard domains (please compare page 9, line 14 ff for domain building). Similar to the building of "micelles" of tensides, there are water soluble and less water soluble domains, but the over all polymer has water soluble properties.

Claims 1-4 and 8 stand rejected under 35 U.S.C. 102(e) as anticipated by Storbeck et al (US 2003/0143413). The Examiner views Storbeck as disclosing a pressure sensitive adhesive comprising a block copolymer which has at least one unit P(A)-P(B)-P(A) where the polymer blocks P(A) have a softening temperature in the range of +20°C to + 175°C;

P(B) has a softening temperature in the range of from -130°C to $+10^{\circ}\text{C}$. The Examiner also sees embodiments disclosed where monomers which carry polar groups are used.

The Examiner appears to misconstrue what the reference actually discloses. At paragraph [0012] Storbeck disclosed a *statistical* (not a block) copolymer "...obtainable by polymerizing a monomer mixture...". The monomers which carry polar groups mentioned at paragraph [0016] relate back to the statistical copolymers, and are neither taught nor suggested for use in any block copolymer.

Block copolymers are described at paragraph [0022], but none of them have anything to do with polar units. Moreover, the Examiner will note the Storbeck's polymer block P(B) can have a softening temperature up to $+10^{\circ}\text{C}$; whereas Applicants' has a softening temperature of not more than 0°C .

Storbeck neither teaches nor suggests any block copolymer comprising hard blocks which include polar units and, furthermore, neither teaches nor suggests a block copolymer having soft blocks which have a softening point of not more than $+10^{\circ}\text{C}$.

Storbeck cannot therefore possibly be seen as anticipating Applicants' claims or rendering them obvious, and the rejection of claims 1-4 and 8 under 35 U.S.C. 102(e) as anticipated by Storbeck et al (US 2003/0143413) should now be withdrawn.

Claims 1-5, 8, 11, 14 and 15 stand rejected under 35 U.S.C. 102(e) as anticipated by Husemann et al (US 2003/0119970).

Initially, it should be pointed out that Applicants' claims 5 & 8 require a P(B/D) block, and claim 11 requires a P(A/C) block; neither of which is suggested or taught by the Husemann reference. The rejection should be withdrawn as to those claims for at least this reason.

Moreover, Husemann's polymer block P(B) has a softening temperature which can be up to +10°C whereas Applicants' have a softening temperature of not more than 0°C.

Furthermore, the Examiner does not even allege that Husemann teaches or suggests anything at all about hard blocks having polar units, such as is required by Applicants' claims.

Accordingly, Applicants' claims are neither anticipated nor suggested by Husemann, and the rejection of claims 1-5, 8, 11, 14 and 15 under 35 U.S.C. 102(e) as anticipated by Husemann et al (US 2003/0119970) should be withdrawn.

Claims 1-15 stand rejected under 35 U.S.C. 102(a/e) as anticipated by Husemann et al (US 2003/0073767). However, in this rejection, just like the previous one, the Examiner does not even allege that the reference teaches or discloses a block copolymer wherein the hard block has a softening temperature of not less than 20°C and at least one polar unit. Husemann '767 has therefore not been shown to anticipate or suggest Applicants' claims, and the rejection of claims 1-15 under 35 U.S.C. 102(a/e) as anticipated by Husemann et al (US 2003/0073767) should now be withdrawn.

Claim 16 stands rejected under 35 U.S.C. 103(a) as obvious over Husemann '767 in view of US 4,413,082 to Gleichenhagen, et al. The differences between Applicants' invention and anything that can be found in Husemann '767 have been discussed above. The Examiner relies on Gleichenhagen, et al for a specific use. This will not, however, in any way overcome any of the differences discussed above with respect to Husemann '767. The rejection of claim 16 under 35 U.S.C. 103(a) as obvious over Husemann '767 in view of US 4,413,082 to Gleichenhagen, et al. should accordingly now be withdrawn.

Claims 1-15 stand rejected under 35 U.S.C. 102(b) as anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Otsu et al. US 5,314,962. Here again, however, the Examiner does not show where the reference teaches or suggests a block copolymer having a hard block that has a softening temperature of not less than 20°C and at least one polar unit. The Examiner has therefore not shown how the reference could possibly anticipate or suggest Applicants' claims, and the rejection of claims 1-15 under 35 U.S.C. 102(b) as anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Otsu et al. US 5,314,962 should now be withdrawn.

Claims 1-15 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1 008 640. The Examiner has not shown where this reference teaches or suggests a block copolymer having a hard block that has a softening temperature of not less than 20°C and at least one polar unit. EP '640 cannot therefore be seen as anticipating or suggesting Applicants' claims, and the rejection of claims 1-15 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1 008 640 should therefore now be withdrawn.

The obviousness-type double patenting rejections over US 6,723,407 and US 6,703,441 are obviated by the accompanying Terminal Disclaimers.

It is respectfully requested that further action of the provisional double patenting rejection over USSN 10/123,625 be deferred until it can be determined which application shall issue first, at which time Applicants will consider an appropriate Terminal Disclaimer.

In view of the present amendments, remarks and terminal disclaimers it is believed that claims 1 and 3-16 are now in condition for allowance. Reconsideration of said claims by the Examiner is respectfully requested and the allowance thereof is courteously solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME


If any extension of time for this response is required, Applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No.

14-1263.

Respectfully submitted,
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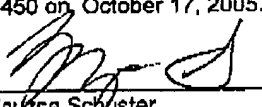
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WCG/tmo

Enclosures- Terminal Disclaimer for US 6,723,407 (2 sheets)
Terminal Disclaimer for US 6,703,441 (2 sheets)
Petition for Extension of Time (1 sheet)

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I hereby certify that this correspondence is being transmitted via facsimile, no 571-273-8300 to the United States Patent and Trademark Office, addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on October 17, 2005.

By 
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Date October 17, 2005